

THE STATUS OF THE SECTION *TROPANTHUS* GRANT  
IN *MIMULUS* OF SCROPHULARIACEAE

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Since the earliest attempts by man to classify plants there have been—and there will continue to be—differences of opinion regarding the grouping of plant specimens into named categories such as species, subspecies, genera and sections. These differences of opinion are due to many causes, one of which is the lack of sufficient material for study. This lack of material sometimes leads to misidentification and subsequent wrong classification which often results in the describing of new species. This in itself is a matter of some importance, but when the new species is taken as the type of a new section in a genus, then it becomes a matter of great importance. Such procedure becomes critical when the characters of the new section are used as evidence for breaking down the boundaries of two genera. It is the belief of the writer that one such instance is exemplified by the describing of the species *Mimulus Treleasei* Grant (1, pp. 325–326) and the subsequent establishing of the section *Tropanthus* (1, pp. 324–325) in *Mimulus* of Scrophulariaceae by the same author. Although the section was made in 1924, this writer was not aware of the basis for founding the section until recently when he began a comprehensive study of the genus *Diplacus*.

The section *Tropanthus* was based upon a single specimen of Scrophulariaceae collected at Tehuacan, Mexico, June 2, 1905 (*Wm. Trelease, no. 68*, Missouri Botanical Garden Herbarium no. 112585). The author honored the collector of the specimen by naming it *Mimulus Treleasei* Grant, and stated that, "The type sheet contains only two short branches of this unusual plant, and as this is the only material known it has been impossible to tell anything about the size of the plant nor can the color of the flowers be determined." The author's photograph of the type (1, pl. 3, opposite p. 374), however, only shows a single short branch, not "two short branches." An examination of the type sheet itself (pl. 20, fig. A) shows a single short branch which is undoubtedly the same as that photographed by the author of *Mimulus Treleasei*. Due to this apparent contradiction, one might believe that one branch of the type had been removed when studying the material, but there is no evidence or mention of such removal.

The first impression, as well as later ones gained from more careful study of the type of *Mimulus Treleasei*, led the writer to conclude that the plant was not a *Mimulus*, but that it belonged to the genus *Berendtia* A. Gray (2, p. 379) [*Berendtiella* Wettst. et Harms (4)]. The species appeared to be *Berendtia laevigata* Robins. & Greenm. (3, p. 39) the type of which was collected

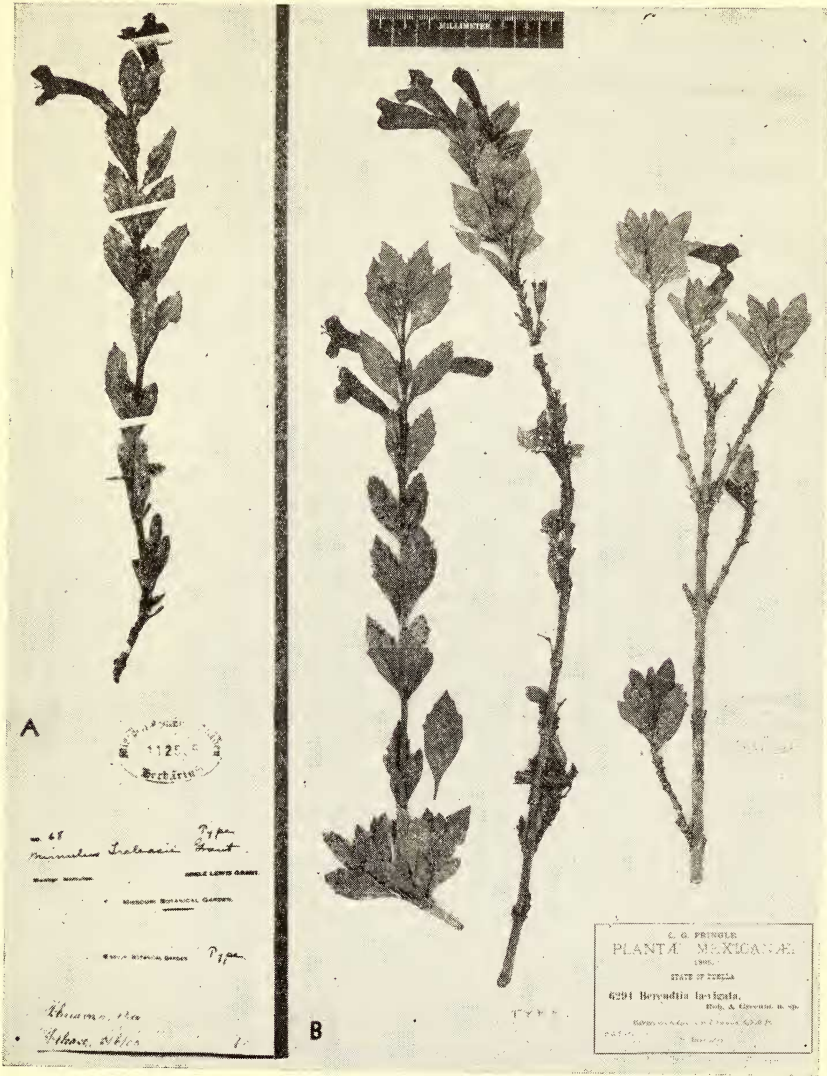


PLATE 20. TYPE SPECIMEN OF MIMULUS TRELEASEI (A) AND BERENDTIA LAEVIGATA (B).

also near Tehuacan, Mexico ("C. G. Pringle, on calcareous ledges near Tehuacan, Puebla, altitude 5,500 feet, 24 December, 1895, no. 6294"). This plant was described in 1896, thirty years before the published date of the new species, *Mimulus Treleasei*. Since the type of *Berendtia laevigata* (pl. 20, fig. B), deposited at the Gray Herbarium and a duplicate of the type deposited at the Missouri Botanical Garden appear to be the same entity as the type of *M. Treleasei*, deposited at the Missouri Botanical Garden, it would seem that Mrs. Grant was not aware of the earlier collection or that she considered the two collections as belonging to different genera. That the two collections are almost identical in their characters is evidence that they belong to the same genus and species. The presence of bractlets on the pedicels of the flowers in both collections is evidence that neither belongs to the genus *Mimulus*.

In the monograph of the genus *Mimulus*, the author of the section *Tropanthus* very definitely attempts to show that *Diplacus* Nutt. should be a section of *Mimulus* L. rather than a distinct genus (1, pp. 114-115). She presents arguments based upon her studies of *Mimulus* to show that all but two of the characters usually used to separate *Diplacus* from *Mimulus* are not valid. These two are "its shrubbiness and peculiar glutinous exudation." As evidence that these characters are not valid, the author presents characters of her newly described species. She states that, "*M. Treleasei*, a newly described species collected by Trelease in the State of Puebla, Mexico, though shrubby and having a glutinous exudation, is not in most of its other characters related to *Diplacus*." She concludes that, "there are then no sufficient characters for maintaining *Diplacus* as a genus" (1, p. 115). The writer is not here particularly concerned as to whether *Diplacus* Nutt. is a genus, but he is concerned by the use of the characters of the section *Tropanthus* to disregard it as such.

In conclusion, it is the opinion of the writer that because the material upon which the section *Tropanthus* is based was wrongly identified, the section is not valid; hence the use of any of its characters as evidence for reducing *Diplacus* Nutt. from a genus to a section of *Mimulus* is not justifiable!

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